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ILLINOIS TOOL WORKS INC.

SUBMISSION OF INVENTION *5*

TO: ITW Patent & Trademark Dept.

Title of Invention: _____

STAND ALONE CONCEPT FORSLIDER ATTACHMENT AFTER PACKAGING MACHINEDivision/Subsidiary
Project NumberH.3254

Patent Dept. Number

TC -001

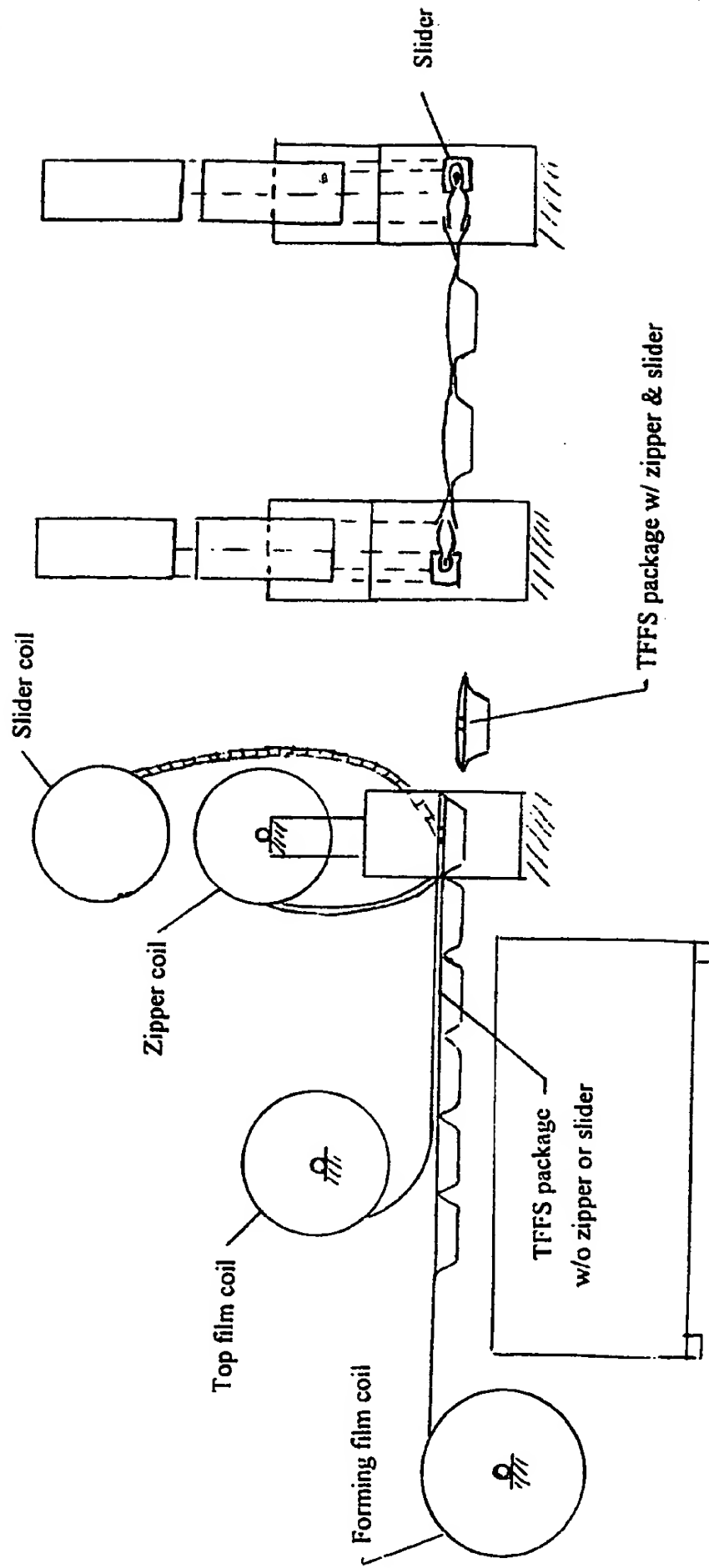
Name	Division/Subsidiary	Location
<u>M. McMAHON, et al</u>	<u>ITW TECH CTR</u>	<u>Glenview, IL</u>
<u>A. MALIN, et al</u>	<u>MINIGRID - ZIPPAK</u>	<u>Glenview, IL</u>
<u>ATTENDEES AT CPG</u>	<u>BRAINSTORM Session ON</u>	

INVENTOR DATA

1. Date I/We thought of the invention was CPG BRAINSTORM Session
2. Attach the original sketch or engineering drawing of the complete idea of the invention, if any. PG. 20 & PG 2
3. Date I/We first disclosed the invention to others was _____
The Disclosure being to ATTENDEES of CPG BRAINSTORM Session
4. Attach a copy of the first written description of the invention, if any. Diagrams 4
PG. 20 & PG. 21
5. Attach copies of pertinent test and lab reports, if any. NONE
6. Does a model or prototype of the invention exist? No Attach photo, if available.
7. Has the invention been incorporated into a product shown or sold to ITW customers? No When and where first shown or sold? _____
8. Has the invention been publicized outside the company (i.e. professional society papers, seminars, dealer meetings, trade shows, etc.) No Date publicized _____ or was planned? _____
9. Designate the specific ITW project or product program to which the invention relates or is a part: H32 SLIDER Date of announcement or disclosure to the public of a product from such program NA
10. Was the invention conceived or developed in a joint program with others outside the Company? No If so was the joint program under written contract? _____

SEE OTHER

Stand Alone Concept for Slider Attachment on daisy chained TFPS packages

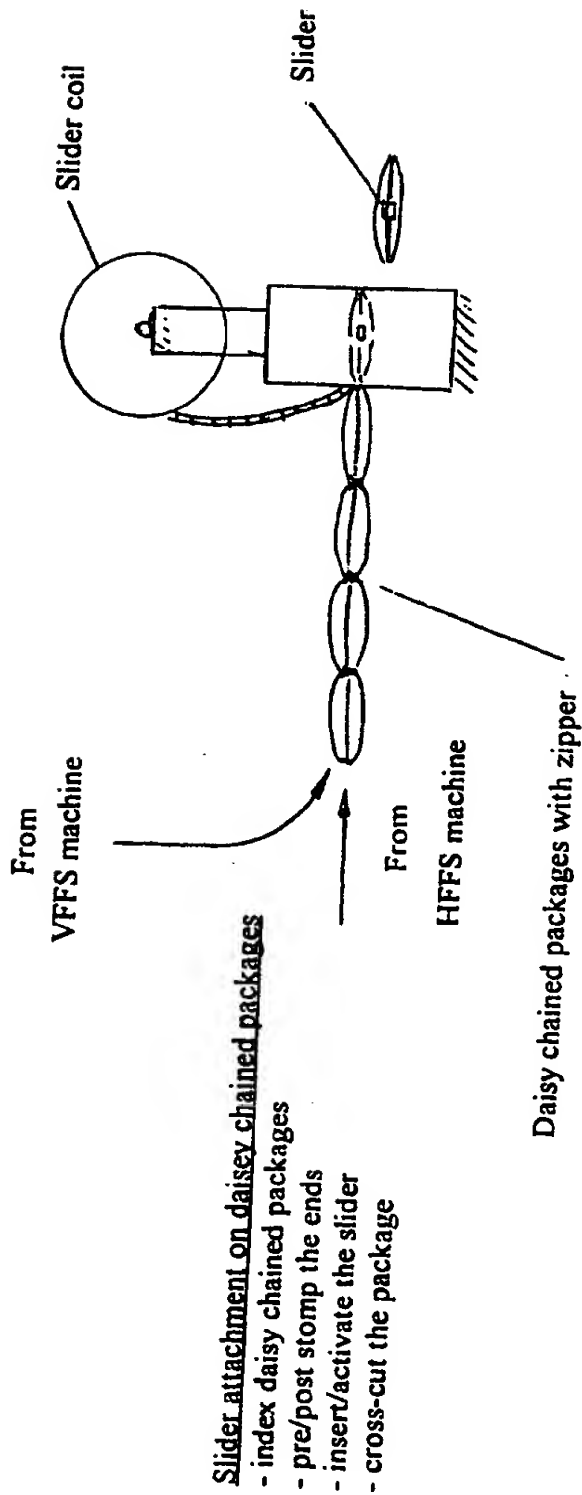


Slider attachment operation

- index and spread flaps
- seal zipper into flaps
- pre/post stomp the ends
- insert/activate the slider
- slit and cross-cut the packages

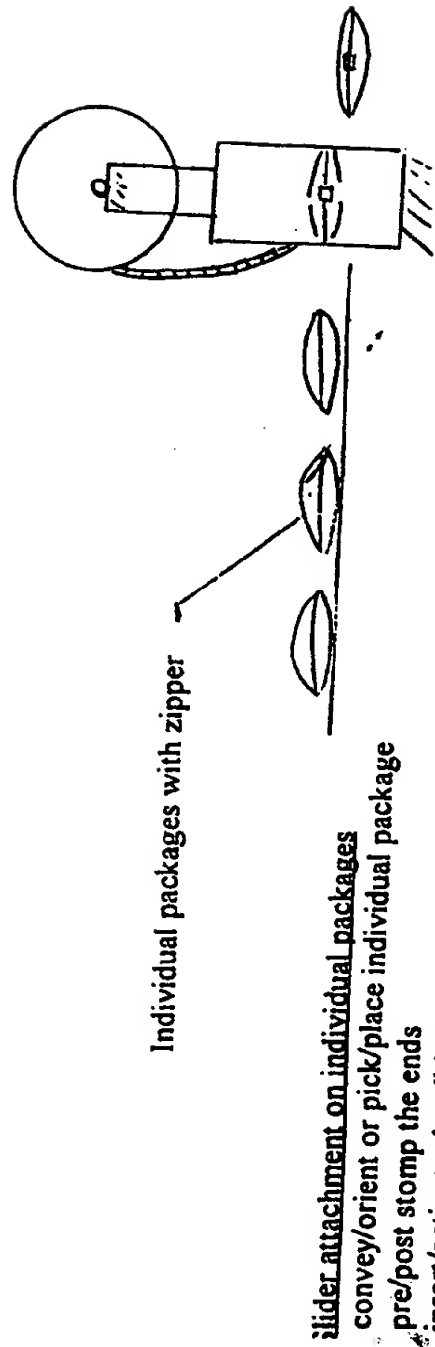


Stand Alone Concept for Slider Attachment on daisy chained or individual FFS packages



Slider attachment on daisy chained packages

- index daisy chained packages
- pre/post stomp the ends
- insert/activate the slider
- cross-cut the package



Slider attachment on individual packages

- convey/orient or pick/place individual package
- pre/post stomp the ends
- insert/activate the slider





ILLINOIS TOOL WORKS INC.

SUBMISSION OF INVENTION *Gift 5*

To: ITW Patent & Trademark Dept.

Title of Invention: _____

SLIDER ATTACHMENT CONCEPT

For HVFS PACKAGING MACHINE

4
Division/Subsidiary
Project Number

H3254

Patent Dept. Number

TC - 002

RECEIVED

Name	Division/Subsidiary	Location
<u>M. McMahon, et al</u>	<u>ITW TECH CTR</u>	<u>Glenview, IL</u>
<u>A. Malin, et al</u>	<u>Minigrip-Zippak</u>	<u>Glenview, IL</u>
<u>ATTENDEES AT CPG. BRAINSTORM SESSION ON</u>		

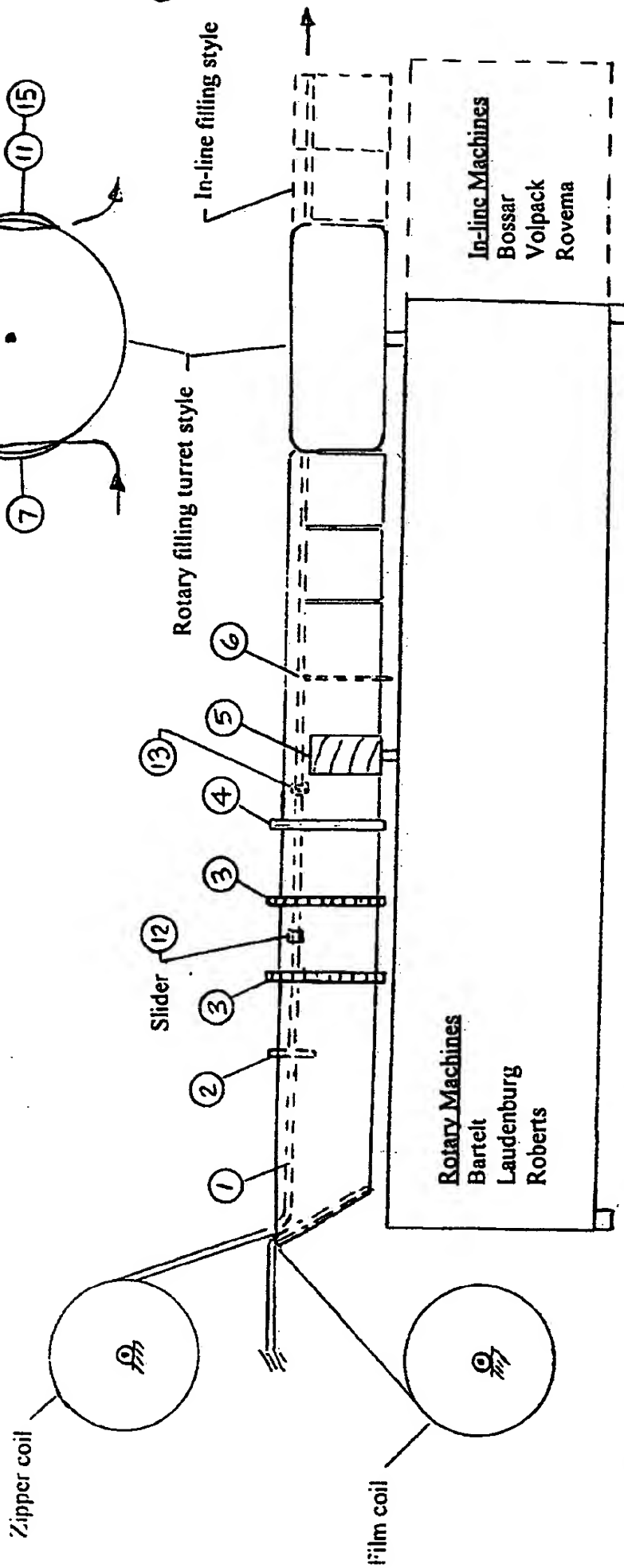
INVENTOR DATA

1. Date I/We thought of the invention was _____ CPG BRAINSTORM SESSION
2. Attach the original sketch or engineering drawing of the complete idea of the invention, if any. PG. 5, PG 6, PG 7, P.
3. Date I/We first disclosed the invention to others was _____
The Disclosure being to ATTENDEES of CPG BRAINSTORM SESSION
4. Attach a copy of the first written description of the invention, if any. DIAGRAMS & NOTE
PG. 5, PG 6, PG 7, PG 8.
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SLIDER Date of announcement or disclosure to the public of a product from such program NA
10. Was the invention conceived or developed in a joint program with others outside the Company? No If so was the joint program under written contract? _____

SEE OTHER S

ZIPPER ATTACHMENT CONCEPT FOR HVFS- Horizontal form, Vertical Fill, Seal Machines

Slider attached to typical machine
 and opening zipper/bag from inside



Operations for typical zipper machine

1. Zipper to film
2. Open the zipper
3. Crush zipper
4. Side seal
5. Pull roller drive
6. Cut-off knife
7. Pouch opening
8. Filling
9. Reject detection
10. Optional fill
11. Top seal final

Slider machine option #1

12. Attach slider prior to folder plow
13. Move slider to open position between 4 & 5
14. Close slider positioning
15. Tamper evident seal

Rotary Machines
 Bartelt
 Laudenburg
 Roberts

In-line Machines
 Bossar
 Volpack
 Rovema

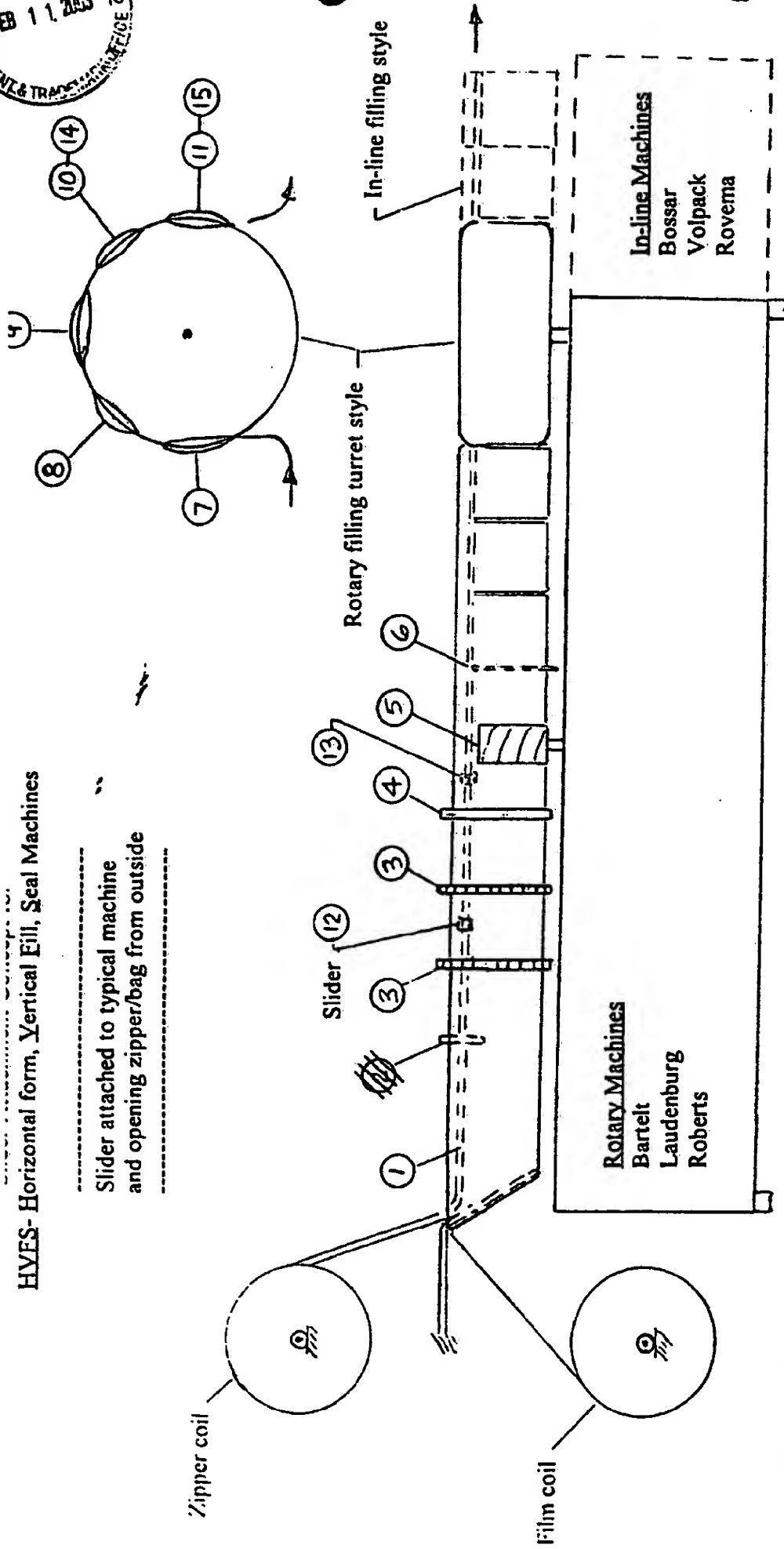
Rotary filling turret style

In-line filling style



HVES- Horizontal form, Vertical Fill, Seal Machines

Slider attached to typical machine
and opening zipper/bag from outside



Operations for typical zipper machine

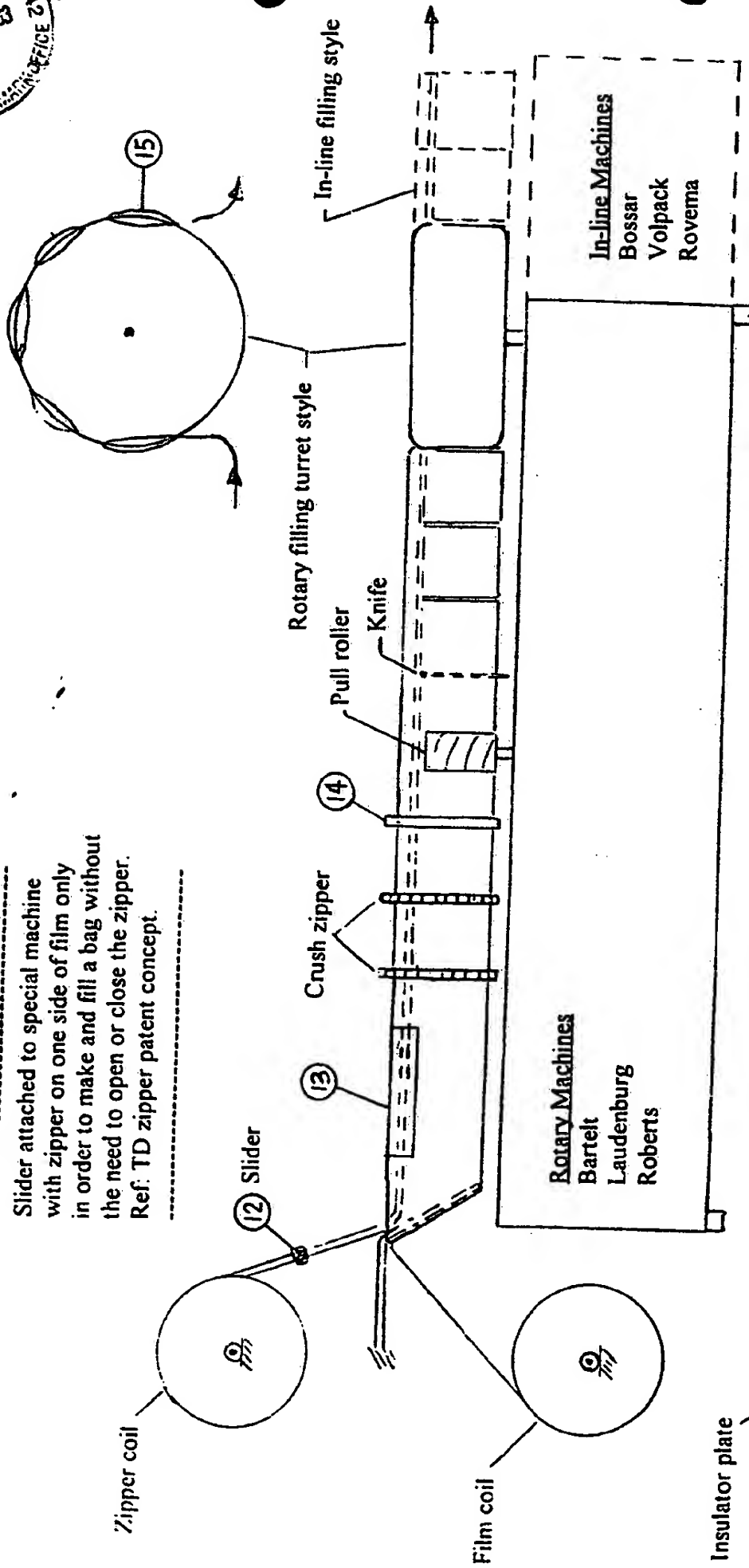
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3. Crush zipper
4. Side seal
5. Pull roller drive
6. Cut-off knife
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10. Optional fill
11. Top seal final

Slider machine option #2

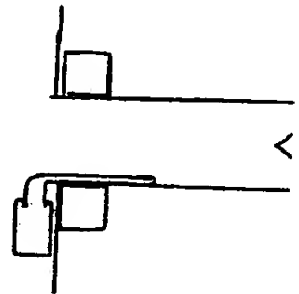
12. Attach slider on trailing edge
13. Open zipper/bag from outside
14. Move slider to closed position
15. Tamper evident seal

Slider Attachment Concept for HIVES- Horizontal form, Vertical Fill, Seal Machines

Slider attached to special machine
with zipper on one side of film only
in order to make and fill a bag without
the need to open or close the zipper.
Ref: TD zipper patent concept.



Bend flanges to prevent
contamination at filling



(15)

Perf seal with peel seal
above zipper

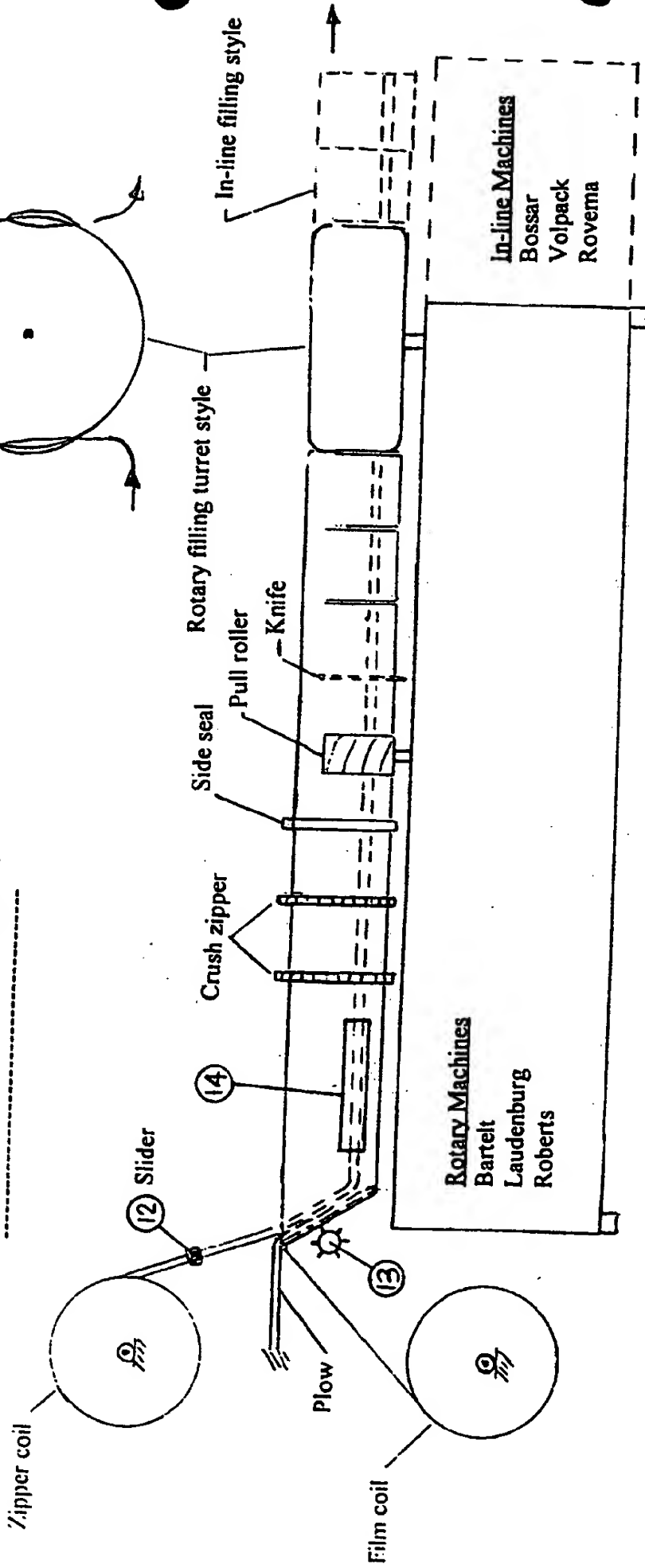


Slider machine option #3

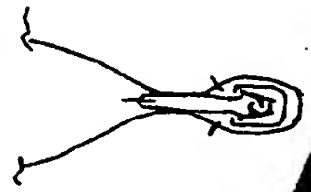
12. Slider insertion and actuation
13. Seal zipper to one side of film only
14. Side seal film only, not zipper
15. Seal film to other flange, side seal ears

HVES- Horizontal form, Vertical Fill, Seal Machines

Slider and zipper attached on typical machine at bottom of film web, after filling thru top, seal top and invert pkg.



Reg, Opti-seal, or Z-T
Zipper in bottom



- Special Gusset
- uneven fold or 2nd web
 - short side seals
 - fill product
 - fold and seal gusset

Slider machine option #4

12. Attach and activate slider
13. Perfscore the film web below slider at plow
14. Seal zipper to bottom of film web by welding flanges over perfscore line



ILLINOIS TOOL WORKS INC.
SUBMISSION OF INVENTION

To: ITW Patent & Trademark Dept.

Title of Invention: _____

SLIDER ATTACHMENT Concept

for TFFS PACKAGING MACHINE

9
Division/Subsidiary
Project Number

43254

Patent Department Number

TC - 013

Name	Division/Subsidiary	Location
<u>M. McMahon, et al</u>	<u>ITW TECH CTR</u>	<u>Glenview, IL.</u>
<u>A. Malin, et al</u>	<u>MINIGRID - ZIPPAK</u>	<u>Glenview, IL.</u>
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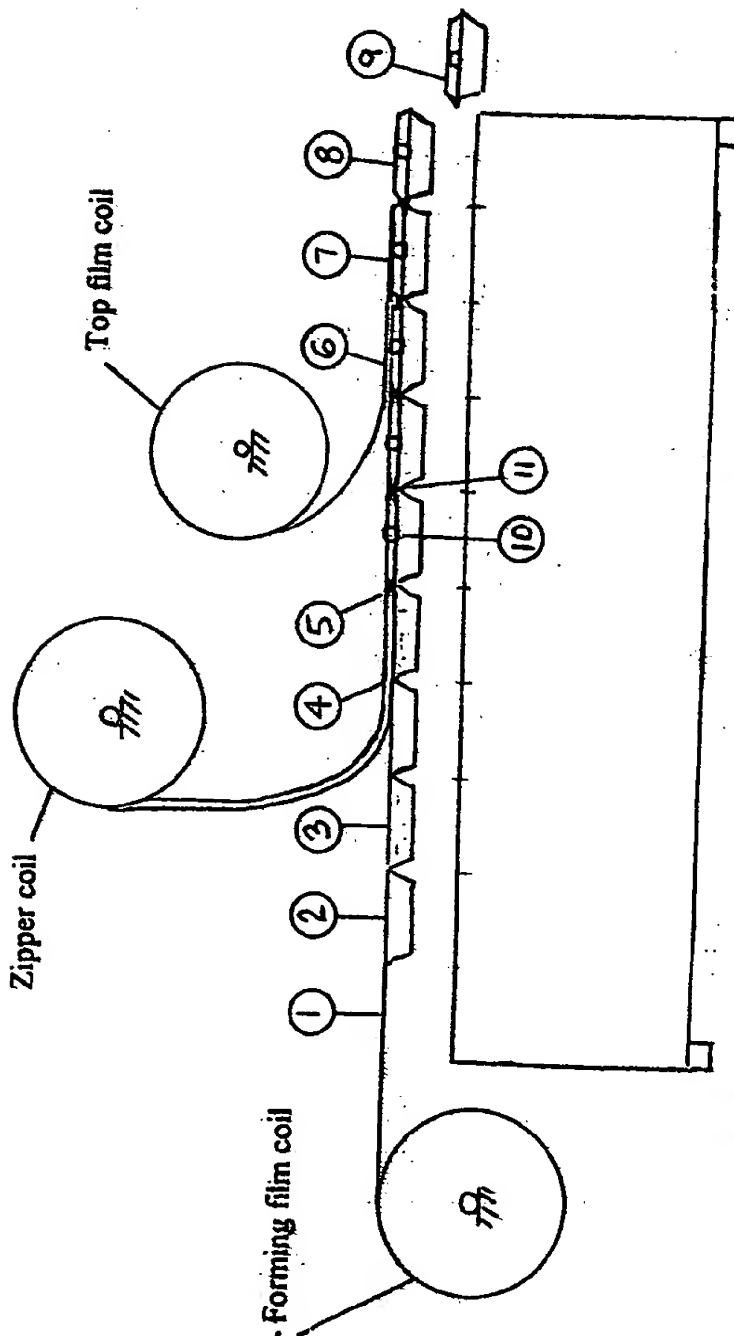
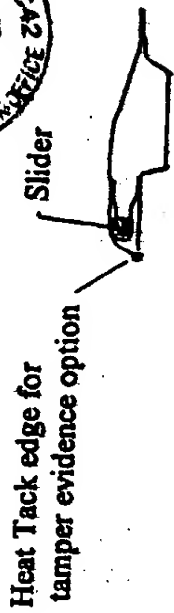
INVENTOR DATA

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3. Date I/We first disclosed the invention to others was _____
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Pg. 18, Pg. 19.
5. Attach copies of pertinent test and lab reports, if any. None
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SEE OTHER

Slider Attachment Concept for
TFES - ThermoForm Fill Seal Machines

2-up machine w/sliders on outsides



Operations for typical zipper machine

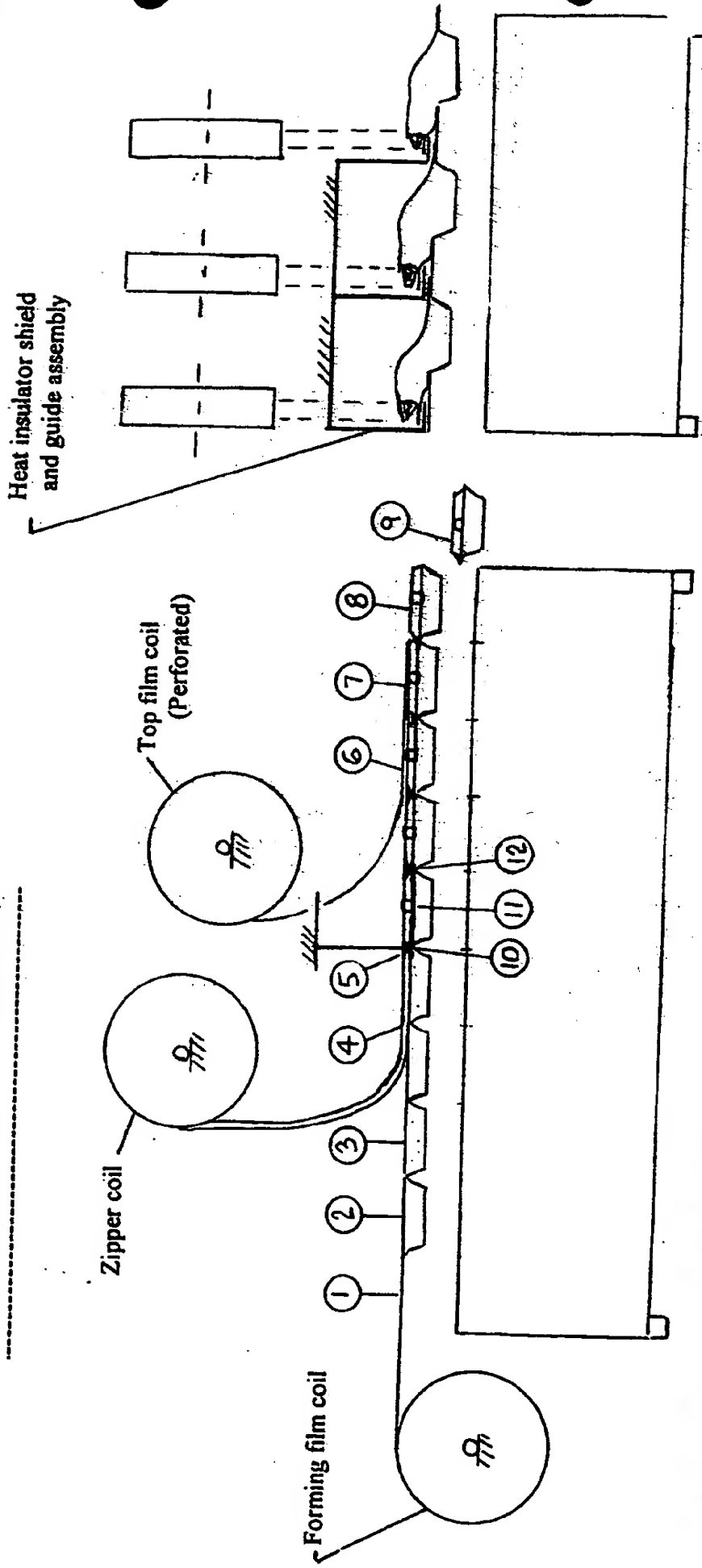
1. Heat forming film
2. Form forming film
3. Load product in formed film
4. Apply zipper to formed film
5. Stomp zipper
6. Enter top film
7. Perimeter sealing
8. Machine direction splitting

Slider machine option #1

10. Insert sliders on zippers
11. End stomp and activate zipper

Slider Attachment Concept for
TFES - ThermoForm Fill Seal Machines

Multiple-up machine w/ sliders on same sides

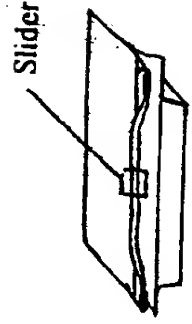


Operations for typical zipper machine

1. Heat forming film
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4. Apply zipper to formed film
5. Stomp zipper
6. Enter top film
7. Perimeter sealing
8. Machine direction splitting

Slider machine option #2

10. Separate top perf film and provide heat shield with guide assembly
11. Insert sliders on zippers
12. End stomp and activate zipper





ITW Technology Center
Advanced Technology

3600 W. Lake Avenue, Glenview, IL 60025
FAX: (847) 724-6240

12
JEM
copy

To: Gerry Levy

Date:

Fax #:

Pages: 3 (including cover sheet)

From: Mike McMahon

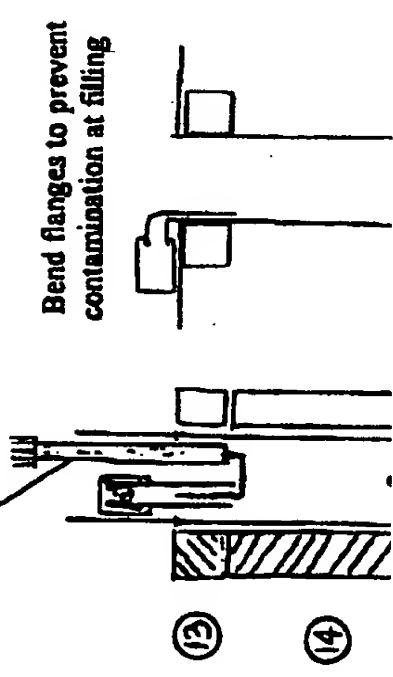
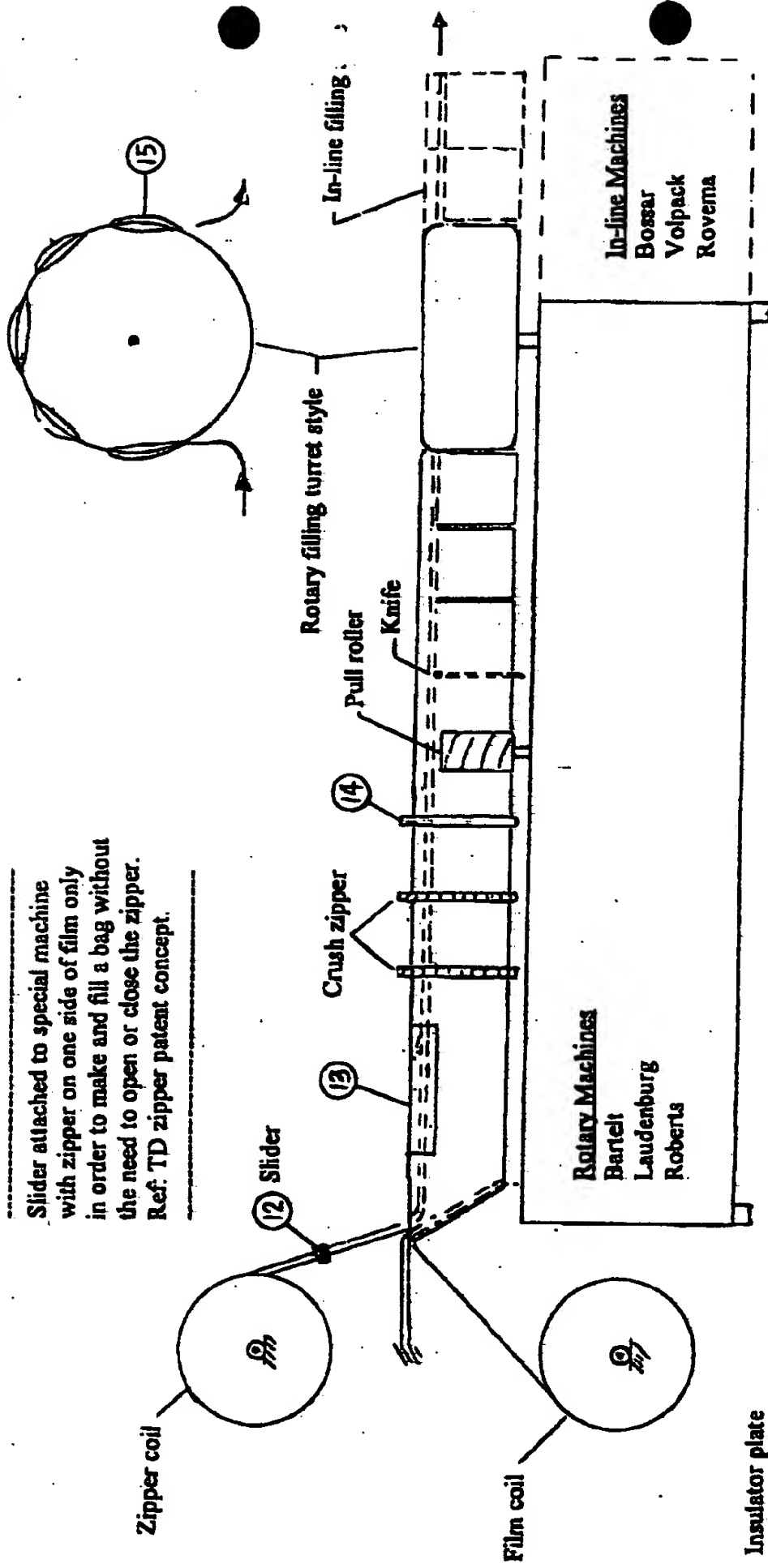
Subject:

Corrections to 5 & 7

RECEIVED
FEB 21 2003
TECHNOLOGY CENTER R3700

Slider Attachment Concept for HVES- Horizontal form, Vertical Fill, Seal Machines

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 Ref: TD zipper patent concept.



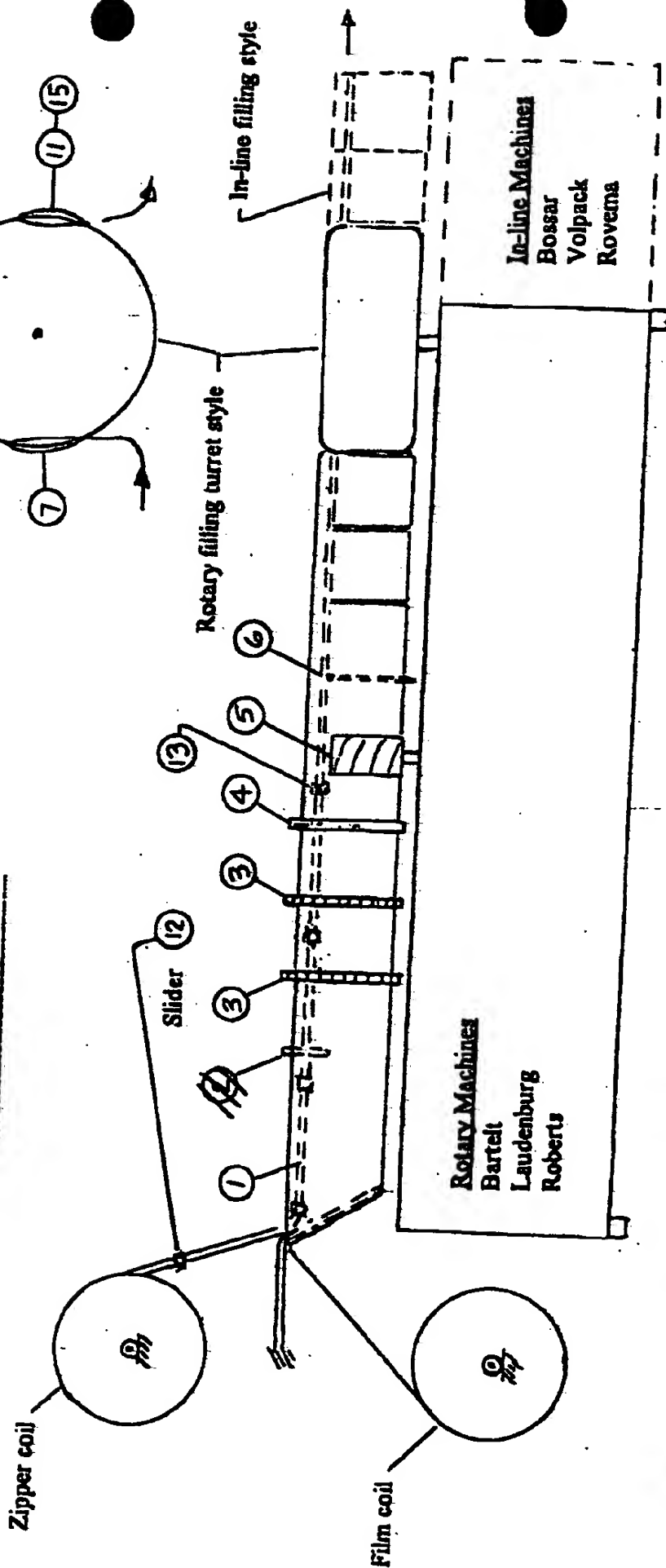
Slider machine option #3

12. Slider insertion and actuation
13. Seal zipper to one side of film only
14. Side seal film only, not zipper
15. Seal film to other flange, side seal ears



Slider Attachment Concept for
HVFS- Horizontal form, Vertical Fill, Seal Machines

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and opening zipper/bag from inside



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